

#### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Kowert on November 18, 2008.

The application has been amended as follows:

**IN THE CLAIMS:**

Please see attached.

2. The following is an examiner's statement of reasons for allowance: The prior art does not teach nor render obvious each and every limitation of the claimed invention. Specifically the prior art does not teach obtaining zoning information for a SAN wherein the zoning information includes information for each zone alias of the san which the SAN object is a logical or physical member describing a particular membership of the SAN object wherein the zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical member of a zone alias via relationship of the SAN object to one or more SAN objects that are physical members of the zone alias.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Philip J Chea  
Examiner  
Art Unit 2453

/Philip J Chea/  
Examiner, Art Unit 2453  
11/19/08

/ARIO ETIENNE/  
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1. (Currently amended) A system, comprising:

a processor; and

a memory comprising program instructions, wherein the program instructions are executable by the processor to implement a zone visualization mechanism configured to:

obtain zoning information for a plurality of Storage Area Network (SAN) objects in a SAN, wherein the SAN comprises one or more host systems, one or more storage devices, and one or more fabrics; and

in response to selection of a particular SAN object in the SAN, display ~~one or more tables~~ of zoning information for the selected SAN object, wherein the ~~one or more tables of~~ zoning information for the selected SAN object includes information one or more entries for each one of multiple zones of the SAN of which the selected SAN object is a member, wherein ~~each of the one or more entries~~ the information for each zone includes information describing a particular membership of the selected SAN object in the respective zone;

wherein the zoning information further includes information for each one of one or more zone aliases of the SAN of which the selected SAN object is a logical or physical member, wherein the information for each zone alias includes information describing a particular membership of the selected SAN object in the respective zone alias, wherein a zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical member of a zone alias via relationship of the SAN object to one or more other SAN objects that are physical members of the zone alias.

2. (Currently amended) The system as recited in claim 1, wherein the ~~one or more tables of~~ zoning information indicates logical zone membership for the selected SAN object, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone.

3. (Canceled)

4. (Currently amended) The system as recited in claim 1, wherein, for each zone of the SAN of which the selected SAN object is a member, the ~~one or more tables of~~ zoning information includes information ~~a separate entry~~ corresponding to each other SAN object through which the selected SAN object is a logical or physical member of the zone, wherein a SAN object is a logical member of a zone via relationship of the SAN object to other SAN objects that are physical members of the zone.

5. (Currently amended) The system as recited in claim 4, wherein each entry the information corresponding to another SAN object through which the selected SAN object is a logical or physical member of the zone is user-selectable to display zoning information for the respective other SAN object, wherein the zoning information for the other SAN object indicates one or more zones of the SAN of which the other SAN object is a logical or physical member.

6. (Currently amended) The system as recited in claim 1, wherein ~~each entry in the one or more tables~~ the information corresponding to a zone in the SAN is user-selectable to display zone-centric information for the respective zone, wherein the zone-centric information indicates one or more SAN objects that are members of the zone and relationships among the one or more SAN objects that are members of the zone.

7. (Previously presented)        The system as recited in claim 6, wherein the indicated one or more SAN objects that are members of the respective zone are each user-selectable to display zoning information for the respective SAN object, wherein the zoning information for the respective SAN object indicates one or more zones of the SAN of which the respective SAN object is a member.

8. (Previously presented)        The system as recited in claim 6, wherein the zone visualization mechanism is further configured to display the zone-centric information for the respective zone in graphical format or textual format.

9. (Currently amended) The system as recited in claim 1, wherein the zone visualization mechanism is further configured to display the zoning information for the selected SAN object in graphical format or textual format.

10. (Currently amended) A storage area network (SAN), comprising:

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one or more host systems;

one or more storage devices;

a SAN fabric for coupling the host systems to the storage devices;

a system configured to implement a zone visualization mechanism, wherein the zone visualization mechanism is configured to:

obtain zoning information for a plurality of SAN objects in the SAN; and

in response to selection of a particular SAN object in the SAN, display ~~one or more tables of~~ zoning information for the selected SAN object, wherein the ~~one or more tables of~~ zoning information for the selected SAN object includes information ~~one or more entries~~ for each one of multiple zones of the SAN of which the selected SAN object is a member, wherein ~~each of the one or more entries~~ the information for each zone includes information describing a particular membership of the selected SAN object in the respective zone

wherein the zoning information further includes information for each one of one or more zone aliases of the SAN of which the selected SAN object is a logical or physical member, wherein the information for each zone alias includes information describing a particular membership of the selected SAN object in the respective zone alias, wherein a zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical member of a zone alias via relationship of the SAN object to one or more other SAN objects that are physical members of the zone alias.

11. (Currently amended) The SAN as recited in claim 10, wherein the ~~one or more tables of~~ zoning information indicates logical zone membership for the selected SAN object, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone.

12. (Canceled)

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13. (Currently amended) The SAN as recited in claim 10, wherein, for each zone of the SAN of which the selected SAN object is a member, the ~~one or more tables of~~ zoning information includes information ~~a separate entry~~ corresponding to each other SAN object through which the selected SAN object is a logical or physical member of the zone, wherein a SAN object is a logical member of a zone via relationship of the SAN object to other SAN objects that are physical members of the zone.

14. (Currently amended) The SAN as recited in claim 13, wherein ~~each entry~~ the information corresponding to another SAN object through which the selected SAN object is a logical or physical member of the zone is user-selectable to display zoning information for the respective other SAN object, wherein the zoning information for the other SAN object indicates one or more zones of the SAN of which the other SAN object is a logical or physical member.

15. (Currently amended) The SAN as recited in claim 10, wherein ~~each entry in the one or more tables~~ the information corresponding to a zone in the SAN is user-selectable to display zone-centric information for the respective zone, wherein the zone-centric information indicates one or more SAN objects that are members of the zone and relationships among the one or more SAN objects that are members of the zone.

16. (Previously presented) The SAN as recited in claim 15, wherein the indicated one or more SAN objects that are members of the respective zone are each user-selectable to display zoning information for the respective SAN object, wherein the zoning information for the respective SAN object indicates one or more zones of the SAN of which the respective SAN object is a member.

17. (Previously presented) The SAN as recited in claim 15, wherein the zone visualization mechanism is further configured to display the zone-centric information for the respective zone in graphical format or textual format.

18. (Currently amended) The SAN as recited in claim 10, wherein the zone visualization mechanism is further configured to display the zoning information for the selected SAN object in graphical format or textual format.

19. (Currently amended) A system, comprising:

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means for obtaining zoning information for a plurality of Storage Area Network (SAN) objects in a SAN, wherein the SAN comprises one or more host systems, one or more storage devices, and one or more fabrics; and

means for displaying zoning information ~~in tabular format~~ for a selected SAN object in the SAN in response to selection of the object, wherein the zoning information for the selected SAN object includes ~~one or more entries~~ information for each one of multiple zones of the SAN of which the selected SAN object is a member, wherein ~~each of the one or more entries~~ the information for each zone includes information describing a particular membership of the selected SAN object in the respective zone; and

means for displaying zone alias information for each one of one or more zone aliases of the SAN of which the selected SAN object is a logical or physical member, wherein the information for each zone alias includes information describing a particular membership of the selected SAN object in the respective zone alias, wherein a zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical member of a zone alias via relationship of the SAN object to one or more other SAN objects that are physical members of the zone alias.

20. (Currently amended) The system as recited in claim 19, wherein the displayed ~~one or more tables of~~ zoning information indicates logical zone membership for the selected SAN object, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone.

21. (Currently amended) The system as recited in claim 19, wherein, for each zone of the SAN of which the selected SAN object is a logical member, the ~~one or more tables of~~ zoning information includes information ~~a separate entry~~ corresponding to each other SAN object through which the selected SAN object is connected to the zone, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone, and wherein the system further comprises means for displaying zoning information for the other SAN objects, wherein the zoning information for the other SAN objects indicates one or more zones of the SAN of which the other SAN objects are logical or physical members.

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22. (Previously presented) The system as recited in claim 19, further comprising means for displaying zone-centric information for the zones of the SAN of which the selected SAN object is a member, wherein the zone-centric information for a zone indicates one or more SAN objects that are members of the zone and relationships among the one or more SAN objects that are members of the zone.

23. (Currently amended) A method, comprising:

obtaining zoning information for a plurality of Storage Area Network (SAN) objects in a SAN, wherein the SAN comprises one or more host systems, one or more storage devices, and one or more fabrics; and

displaying ~~one or more tables of~~ zoning information for a selected SAN object in the SAN in response to selection of the SAN object, wherein the ~~one or more tables of~~ zoning information for the selected SAN object includes information ~~one or more entries~~ for each one of multiple zones of the SAN of which the selected SAN object is a member, wherein ~~each of the one or more entries~~ the information for each zone includes information describing a particular membership of the selected SAN object in the respective zone;

wherein the zoning information further includes information for each one of one or more zone aliases of the SAN of which the selected SAN object is a logical or physical member, wherein the information for each zone alias includes information describing a particular membership of the selected SAN object in the respective zone alias, wherein a zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical member of a zone alias via relationship of the SAN object to one or more other SAN objects that are physical members of the zone alias.

24. (Currently amended) The method as recited in claim 23, wherein the displayed ~~one or more tables of~~ zoning information indicates logical zone membership for the selected SAN object, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone.



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25. (Canceled)

26. (Currently amended)      The method as recited in claim 23, wherein, for each zone of the SAN of which the selected SAN object is a member, the ~~one or more tables of~~ zoning information includes information ~~a separate entry~~ corresponding to each other SAN object through which the selected SAN object is a logical or physical member of the zone, wherein a SAN object is a logical member of a zone via relationship of the SAN object to other SAN objects that are physical members of the zone.

27. (Currently amended)      The method as recited in claim 26, further comprising:

accepting user input selecting ~~an entry~~ information corresponding to a particular other SAN object through which the selected SAN object is a logical or physical member of the zone; and

displaying zoning information for the particular other SAN object in response to the user input ~~selecting the entry corresponding to the particular other SAN object~~, wherein the zoning information for the particular other SAN object indicates one or more zones of the SAN of which the particular other SAN object is a logical or physical member.

28. (Currently amended)      The method as recited in claim 23, further comprising:

accepting user input selecting ~~a particular entry in the one or more tables~~ one of the indicated one or more zones of the SAN of which the selected SAN object is a member; and

displaying zone-centric information for ~~[[a]] the selected zone corresponding to the selected entry~~ in response to the user input ~~selecting the particular entry in the one or more tables~~, wherein the zone-centric information indicates one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~ and relationships among the one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~.

29. (Currently amended)      The method as recited in claim 28, further comprising:

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accepting user input selecting one of the one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~; and

displaying zoning information for the user-selected SAN object in response to the user input selecting the SAN object, wherein the zoning information for the user-selected SAN object indicates one or more zones of the SAN of which the user-selected SAN object is a member.

30. (Previously presented) The method as recited in claim 28, further comprising displaying the zone-centric information for the zone corresponding to the selected entry in one of graphical format or textual format.

31. (Currently amended) The method as recited in claim 23, further comprising displaying zoning information for the selected SAN object in graphical format or textual format.

32. (Currently amended) A ~~computer-accessible~~ computer readable storage medium comprising program instructions, wherein the program instructions are computer-executable to implement:

obtaining zoning information for a plurality of Storage Area Network (SAN) objects in a SAN, wherein the SAN comprises one or more host systems, one or more storage devices, and one or more fabrics; and

displaying ~~one or more tables of~~ zoning information for a selected SAN object in the SAN in response to selection of the SAN object, wherein the ~~one or more tables of~~ zoning information for the selected SAN object includes information ~~one or more entries~~ for each one of multiple zones of the SAN of which the selected SAN object is a member, wherein ~~each of the one or more entries~~ the information for each zone includes information describing a particular membership of the selected SAN object in the respective zone;

wherein the zoning information further includes information for each one of one or more zone aliases of the SAN of which the selected SAN object is a logical or physical member, wherein the information for each zone alias includes information describing a particular membership of the selected SAN object in the respective zone alias, wherein a zone alias represents a logical grouping of SAN objects, and wherein a SAN object is a logical

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member of a zone alias via relationship of the SAN object to one or more other SAN objects that are physical members of the zone alias.

33. (Currently amended) The ~~computer-accessible~~ computer readable storage medium as recited in claim 32, wherein the displayed ~~one or more tables of~~ zoning information indicates logical zone membership for the selected SAN object, wherein a SAN object is a logical member of a zone via relationship of the SAN object to one or more other SAN objects that are physical members of the zone.

34. (Canceled)

35. (Currently amended) The ~~computer-accessible~~ computer readable storage medium as recited in claim 32, wherein, for each zone of the SAN of which the selected SAN object is a member, the ~~one or more tables of~~ zoning information includes information a separate entry corresponding to each other SAN object through which the selected SAN object is a logical or physical member of the zone, wherein a SAN object is a logical member of a zone via relationship of the SAN object to other SAN objects that are physical members of the zone.

36. (Currently amended) The ~~computer-accessible~~ computer readable storage medium as recited in claim 35, wherein the program instructions are further computer-executable to implement:

accepting user input selecting ~~an entry~~ information corresponding to a particular other SAN object through which the selected SAN object is a logical or physical member of the zone; and

displaying zoning information for the particular other SAN object in response to the user input ~~selecting the entry corresponding to the particular other SAN object~~, wherein the zoning information for the particular other SAN object indicates one or more zones of the SAN of which the particular other SAN object is a logical or physical member.

37. (Currently amended) The ~~computer-accessible~~ computer readable storage medium as recited in claim 32, wherein the program instructions are further computer-executable to implement:

accepting user input selecting ~~a particular entry in the one or more tables~~ one of the indicated one or more zones of the SAN of which the selected SAN object is a member; and

displaying zone-centric information for ~~[[a]] the selected zone corresponding to the selected entry~~ in response to the user input ~~selecting the particular entry in the one or more tables~~,

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wherein the zone-centric information indicates one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~ and relationships among the one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~.

38. (Currently amended)      The ~~computer-accessible~~ computer readable storage medium as recited in claim 37, wherein the program instructions are further computer-executable to implement:

accepting user input selecting one of the one or more SAN objects that are members of the selected zone ~~corresponding to the selected entry~~; and

displaying zoning information for the user-selected SAN object in response to the user input selecting the SAN object, wherein the zoning information for the user-selected SAN object indicates one or more zones of the SAN of which the user-selected SAN object is a member.

39. (Currently amended)      The ~~computer-accessible~~ computer readable storage medium as recited in claim 37, wherein the program instructions are further computer-executable to implement displaying the zone-centric information for the zone corresponding to the selected entry in one of graphical format or textual format.

40. (Currently amended)      The ~~computer-accessible~~ computer readable storage medium as recited in claim 32, wherein the program instructions are further computer-executable to implement displaying zoning information for the selected SAN object in graphical format or textual format.

41.      (Previously presented) The system as recited in claim 1, wherein the information describing a particular membership of the selected SAN object in the respective zone includes one or more of information identifying the respective zone, information identifying a fabric that includes the respective zone, information identifying a SAN object through which the selected SAN object is a member

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of the respective zone, and information indicating membership status of the selected SAN object in the respective zone, wherein the membership status indicates one of active and inactive.

42. (Previously presented) The SAN as recited in claim 10, wherein the information describing a particular membership of the selected SAN object in the respective zone includes one or more of information identifying the respective zone, information identifying a fabric that includes the respective zone, information identifying a SAN object through which the selected SAN object is a member of the respective zone, and information indicating membership status of the selected SAN object in the respective zone, wherein the membership status indicates one of active and inactive.

43. (Previously presented) The method as recited in claim 23, wherein the information describing a particular membership of the selected SAN object in the respective zone includes one or more of information identifying the respective zone, information identifying a fabric that includes the respective zone, information identifying a SAN object through which the selected SAN object is a member of the respective zone, and information indicating membership status of the selected SAN object in the respective zone, wherein the membership status indicates one of active and inactive.

44. (Currently amended) The ~~computer-accessible~~ computer readable storage medium as recited in claim 32, wherein the information describing a particular membership of the selected SAN object in the respective zone includes one or more of information identifying the respective zone, information identifying a fabric that includes the respective zone, information identifying a SAN object through which the selected SAN object is a member of the respective zone, and information indicating membership status of the selected SAN object in the respective zone, wherein the membership status indicates one of active and inactive.